CLAIM LISTING SHOWING CLAIM AMENDMENTS

1. (currently amended) A hitch ball engaging assembly operative to secure to a hitch ball, comprising:

(a) a socket sized and adapted to matably receive a hitch ball:

(b) at least one locking element associated with said socket, said locking element movable between,

(1) a locked state to prevent removal of the hitch ball form said socket and

(2) an unlocked state to permit insertion and removal of the hitch ball into and out of said socket; and

(c) a rotatable locking collar journaled for rotation relative to said socket, said locking collar having a recess and a cam face and movable between

(1) a first position wherein the cam face is operative to move said locking element into the locked state and

(2) a second position operative to permit said locking element to move into the unlocked state wherein said locking element is received in the recess.

2. (original) A hitch ball engaging assembly according to claim 1 including a latch operative to selectively retain said locking collar in a selected one of the first and second positions.

3. (original) A hitch ball engaging assembly according to claim 1 including an actuator member adapted to move said locking collar between the first and second positions.

4. (original) A hitch ball engaging assembly according to claim 1 wherein said socket has a side wall having a hole formed therethrough with a hole diameter, said locking member being a spherical ball disposed in the hole.

5. (original) A hitch ball engaging assembly according to claim 4 wherein said side wall has a plurality of holes formed therein and said hitch ball engaging assembly includes a plurality of spherical balls, there being a respective spherical ball disposed in a respective hole, each of said spherical ball movable between a locked state thereby to prevent removal of a hitch ball that is received in said socket and an unlocked state to permit insertion and removal of a hitch ball into and out of said socket, said locking collar operative to move each of said spherical ball into the locked state when in the first position and to permit each said spherical ball into the unlocked state when in the second position.

6. (original) A hitch ball engaging assembly according to claim 5 said holes are equiangularly disposed around said sidewall.

7. (original) A hitch ball engaging assembly according to claim 1 including:

(a) a base plate disposed on said socket and

(b) a retaining ring disposed on said socket in spaced relation to said base plate,

(c) said locking collar disposed between said retaining ring and said base plate.

8. (original) A hitch ball engaging assembly according to claim 7 including an actuator member secured to said locking collar and adapted to move said locking collar between the first and second positions.

9. (original) A hitch ball engaging assembly according to claim 8 wherein:

(a) said base plate includes a flange having a slot formed therein;

(b) said actuator includes an elongated rod projecting radially outwardly from said locking collar, and

(c) a distal end portion of said rod is received in the slot.

10. (original) A hitch ball engaging assembly according to claim 9 wherein the slot in said flange includes first and second detent sections corresponding to the first and second positions of said locking collar, said detent section operative to selectively retain said rod therein to retain said locking collar in a selected one of the first and second positions.

11. (currently amended) An adapter apparatus operative to interconnect a pin connector of a fifth wheel type tractor/trailer coupling and a hitch ball of a gooseneck type tractor/trailer coupling, comprising:

(a) an extension member including a first end portion and a second end portion opposite said first end portion;

(b) a pin connector engaging assembly disposed on said first end portion of said extension member, said pin connector engaging assembly

(1) sized and adapted to matably receive a pin connector of a fifth wheel type tractor/trailer coupling and

(2) including at least one attachment element associated therewith,

(a) said attachment element adapted to releasably engage the pin connector of a fifth wheel type tractor/trailer coupling

(b) thereby to prevent removal of the pin connector when in an engaged state; and

(c) a hitch ball engaging assembly disposed on said second end portion of said extension member, said hitch ball engaging assembly

(1) sized and adapted to matably receive a hitch ball of a gooseneck type tractor/trailer coupling and

(2) including at least one locking element associated therewith that is movable between a locked state and an unlocked state,

(a) said locking element when in the locked state operative to lock the hitch ball thereby to prevent removal thereof and

(b) said locking element when in the unlocked state operative to permit removal of the hitch ball, and

(3) including a rotatable locking collar having a recess and a cam face, said locking collar movable between a first position wherein the cam face is operative to move said locking element into the locked state and a second position operative to permit said locking element to move into the unlocked state wherein said locking element is received in the recess.

12. (currently amended) An adapter apparatus according to claim ~~10~~ 11 wherein said extension member is formed as an elongated shaft with said first and second end portions each being hollow.

13. (original) An adapter apparatus according to claim 12 wherein said extension member is a cylindrical tube.

14. (original) An adapter apparatus according to claim 11 wherein said attachment element is a plurality of set screws threadably received in the first end portion of said extension tube.

15. (original) An adapter apparatus according to claim 11 wherein said locking element is a spherical ball bearing.

16. (original) An adapter apparatus according to claim 11 wherein said hitch ball engaging assembly includes a rotatable locking collar movable between a

first position operative to move said locking element into the locked state and a second position operative to permit said locking element to move into the unlocked state.

17. (original) An adapter apparatus according to claim 16 wherein said hitch ball engaging assembly includes a latch operative to selectively retain said locking collar in a selected one of the first and second positions.

18. (original) An adapter apparatus according to claim 16 wherein said hitch ball engaging assembly includes an actuator member adapted to move said locking collar between the first and second positions.

19. (currently amended) An adapter apparatus operative to interconnect a pin connector of a fifth wheel type tractor/trailer coupling and a hitch ball of a gooseneck type tractor/trailer coupling, comprising:

(a) an extension member formed as an elongated tubular piece including a first end portion and a second end portion opposite said first end portion,

(1) said first end portion including a surrounding first side wall having a first interior sized and adapted to matably receive a pin connector of a fifth wheel type tractor/trailer coupling in a first mated state and

(2) said second end portion sized including a surrounding second sidewall having a second interior adapted to matably receive a hitch ball of a gooseneck type tractor/trailer coupling in a second mated state,

(a) said second sidewall having a hole formed therethrough with a hole diameter;

(b) a pin connector engaging assembly disposed on said first end portion of said extension member, said pin connector engaging assembly

(1) including at least one attachment element associated therewith, said attachment element

(a) adapted to releasably engage a pin connector of a fifth wheel type tractor/trailer coupling

(b) thereby to prevent removal thereof when in an engaged state; and

(c) a hitch ball engaging assembly disposed on said second end portion of said extension member, said hitch ball engaging assembly including

(1) at least one spherical ball disposed in the hole in said second side wall, said spherical ball movable between

(a) a locked state thereby to prevent removal of a hitch ball that is received in the second end portion and

(b) an unlocked state to permit insertion and removal of a hitch ball into and out of the second end portion,

(2) a rotatable locking collar having a recess and a cam face, said locking collar movable between a first position wherein the cam face is operative to move said spherical ball into the locked state and a second position operative to permit said spherical ball to move into the unlocked state wherein said spherical ball is received in the recess.

20. (original) An adapter apparatus according to claim 19 wherein:

(a) said second end portion has a plurality of holes formed therein and

(b) said hitch ball engaging assembly includes a plurality of spherical balls, there being a respective spherical ball disposed in a respective hole, each of said spherical ball movable between

(1) a locked state thereby to prevent removal of a hitch ball that is received in the second end portion and

(2) an unlocked state to permit insertion and removal of a hitch ball into and out of the second end portion

(c) said locking collar having a plurality of cam faces each operative to move a respective ~~each of~~ said spherical ball into the locked state when in the first position and a plurality of recesses each operative to receive a respective ~~permit each~~ said spherical ball when in ~~into~~ the unlocked state when in the second position.

21. (original) An adapter apparatus according to claim 20 wherein said holes are equiangularly disposed around said second end portion.

22. (original) An adapter apparatus according to claim 19 wherein said extension member is formed as an elongated hollow cylindrical tube.

23. (original) An adapter apparatus according to claim 22 including

(a) a base plate disposed on the second end portion of said extension member and

(b) a retaining ring disposed on the second end portion of said extension member in spaced relation to said base plate,

(c) said locking collar disposed between said retaining ring and said base plate.

24. (original) An adapter apparatus according to claim 23 wherein said hitch ball engaging assembly includes an actuator member secured to said locking collar and adapted to move said locking collar between the first and second positions.

25. (original) An adapter apparatus according to claim 24 wherein:

(a) said base plate includes a flange having a slot formed therein;

(b) said actuator includes an elongated rod projecting radially outwardly from said locking collar, and

(c) a distal end portion of said rod being received in the slot.

26. (original) An adapter apparatus according to claim 25 wherein the slot in said flange includes first and second detent sections corresponding to the first and second positions of said locking collar, said detent section operative to selectively retain said rod therein to retain said locking collar in a selected one of the first and second positions.

27. (original) An adapter apparatus according to claim 19 wherein said hitch ball engaging assembly includes a latch operative to selectively retain said locking collar in a selected one of the first and second positions.

28. (currently amended) An adapter apparatus operative to interconnect a pin connector of a fifth wheel type tractor/trailer coupling and a hitch ball of a gooseneck type tractor/trailer coupling, comprising:

(a) an elongated cylindrical tube including a surrounding side wall defining a hollow interior and having a first end and a second end opposite said first end, said tube including

(1) a first end portion sized and adapted to matably receive a pin connector of a fifth wheel type tractor/trailer coupling in a first mated state and

(2) a second end portion sized and adapted to matably receive a hitch ball of a gooseneck type tractor/trailer coupling in a second mated state, and having

(a) a plurality of holes formed through said sidewall proximately to the second end;

(b) a base plate secured to the second end of said tube;

(c) a retaining ring secured to the second end portion of said extension member in spaced relation to said base plate,

(1) the holes in said second end portion located between said base plate and said retaining ring;

(d) a plurality of ball bearings, there being a respective ball bearing in a respective one of the holes, each said ball bearing movable between

(1) a locked state thereby to prevent removal of a hitch ball that is received in the second end portion and

(2) an unlocked state to permit insertion and removal of a hitch ball into and out of the second end portion,;

(e) a locking collar rotatably disposed between said retaining ring and said base plate and constrained thereby against longitudinal movement, said locking collar

(1) operative to retain each said ball bearing in its respective said hole,

(2) movable between a first position operative to move each said ball bearing into the locked state and a second position operative to permit each said ball bearing to move into the unlocked state.

29. (original) An adapter apparatus according to claim 28 including a pin connector engaging assembly disposed on said first end portion of said extension member, said pin connector engaging assembly

(a) including at least one attachment element associated therewith,

(1) said attachment element adapted to releasably engage a pin connector of a fifth wheel type tractor/trailer coupling

(2) thereby to prevent removal thereof when in an engaged state.

30. (original) An adapter apparatus according to claim 28 including an actuator member secured to said locking collar and adapted to move said locking collar between the first and second positions.

31. (original) An adapter apparatus according to claim 30 wherein:

(a) said base plate includes a flange having a slot formed therein;

(b) said actuator includes an elongated rod projecting radially outwardly from said locking collar, and

(c) a distal end portion of said rod is received in the slot.

32. (original) An adapter apparatus according to claim 31 wherein the slot in said flange includes first and second detent sections corresponding to the first and second positions of said locking collar, said detent section operative to selectively retain said rod therein to retain said locking collar in a selected one of the first and second positions.

33. (original) An adapter apparatus according to claim 28 wherein said holes are equiangularly disposed around said second end portion.

34. (original) An adapter apparatus according to claim 28 wherein said locking collar has a plurality of recesses each operative to receive a respective one of said ball bearings in the unlocked state when said locking collar is in the second first position and a plurality of cam faces each operative to place a respective one of said ball bearings in the locked state when said locking collar is in the first position.

35. (currently amended) In a tractor/trailer combination wherein a tractor vehicle is provided with a bed-mounted hitch ball adapted for connection to a gooseneck type coupling and wherein a trailer vehicle is provided with a fifth wheel type pin connector, an improvement comprising an extension member formed as an elongated, hollow cylindrical tube having a sidewall and including a hollow first end

portion sized to receive the pin connector and a hollow second end portion opposite said first end portion sized to receive the hitch ball, said extension member including a pin connector engaging assembly disposed on said first end portion of said extension member, said pin connector engaging assembly sized and adapted to matably receive the pin connector and having at least one attachment element associated therewith that is adapted to releasably engage the pin connector thereby to prevent removal of the mated pin connector when in an engaged state, and a hitch ball engaging assembly disposed on said second end portion of said extension member, said hitch ball engaging assembly ~~sized and adapted to matably receive the hitch ball and~~ including at least one spherical ball bearing located in a hole formed in the sidewall of the second end portion and movable between an locked state and an unlocked state, and a rotatable locking collar rotatable between a first rotational position thereby to move said ball bearing into the locked state and a second rotational position thereby to permit said locking element to move into the unlocked state, said ball bearing ~~locking element associated therewith that is movable between a locked state and an unlocked state, said locking element~~ when in the locked state operative to lock the mated hitch ball thereby to prevent removal thereof from the second end portion of said tube and said ~~locking element~~ ball bearing when in the unlocked state operative to permit removal of the mated hitch ball from the second end portion of said tube.

36. (canceled)

37. (canceled)

38. (canceled)

39. (canceled)

40. (currently amended) The improvement according to claim ~~39~~ 35 wherein said hitch ball engaging assembly includes a latch operative to selectively retain said locking collar in a selected one of the first and second positions.

41. (currently amended) The improvement according to claim ~~39 wherein~~ 35 said hitch ball engaging assembly includes an actuator member adapted to move said locking collar between the first and second positions.

42. (currently amended) A method of interconnecting a pin connector of a fifth wheel type tractor/trailer coupling and a hitch ball of a gooseneck type tractor/trailer coupling, comprising:

(a) providing a hollow, cylindrical tube having a surrounding sidewall and first and second end portions~~engaging said pin connector with a first end portion of a rigid, elongated tubular member~~;

(b) releasably securing said pin connector ~~to~~ inside of said first end portion;

(c) mating~~engaging~~ said hitch ball inside of said ~~with a~~ second end portion of said tube~~an elongated tubular member~~; ~~and~~

(d) providing a locking element in a hole formed in said second end portion, said locking element being movable between a locked state that is operative to lock the mated hitch ball thereby to prevent removal thereof and an unlocked state operative to permit removal of the mated hitch ball; and

~~(d)~~(e) releasably securing said hitch ball inside of ~~to~~ said second end portion by rotatably moving a collar that surrounds said second end portion whereby a cam face on said collar moves said locking element into the locked state.

43. (canceled)

44. (canceled)

45. (canceled)

46. (currently amended) A method according to claim ~~45~~ 42 including the step of selectively retaining said locking element in the locked state and in the unlocked state.

47. (represented—formerly dependent claim 10) A hitch ball engaging assembly operative to secure to a hitch ball, comprising:

(a) a socket sized and adapted to matably receive a hitch ball:

(b) at least one locking element associated with said socket, said locking element movable between,

(1) a locked state to prevent removal of the hitch ball form said socket and

(2) an unlocked state to permit insertion and removal of the hitch ball into and out of said socket;

(c) a base plate disposed on said socket and including a flange having a slot formed therein, the slot in said flange having first and second detent sections;

(d) a retaining ring disposed on said socket in spaced relation to said base plate;

(e) a rotatable locking collar disposed between said retaining ring and said base plate and journaled for rotation relative to said socket and movable between

(1) a first position operative to move said locking element into the locked state and

(2) a second position operative to permit said locking element to move into the unlocked state;

(f) an actuator member secured to said locking collar and adapted to move said locking collar between the first and second positions, said actuator

including an elongated rod projecting radially outwardly from said locking collar with a distal end portion of said rod being received in the slot of said flange, said first and second detent sections respectively corresponding to the first and second positions of said locking collar and operative to selectively retain said rod therein to retain said locking collar in a selected one of the first and second positions.

48. (new) A hitch ball engaging assembly operative to secure to a hitch ball, comprising:

(a) a socket sized and adapted to matably receive a hitch ball:

(b) at least one locking element associated with said socket, said locking element movable between,

(1) a locked state to prevent removal of the hitch ball form said socket and

(2) an unlocked state to permit insertion and removal of the hitch ball into and out of said socket;

(c) a base plate disposed on said socket;

(d) a retaining ring disposed on said socket in spaced relation to said base plate;

(e) a rotatable locking collar disposed between said retaining ring and said base plate and journaled for rotation relative to said socket and movable between

(1) a first position operative to move said locking element into the locked state and

(2) a second position operative to permit said locking element to move into the unlocked state; and

(f) an elongated actuator rod projecting radially outwardly from said locking collar and adapted upon manipulation to move said locking collar between the first and second positions.